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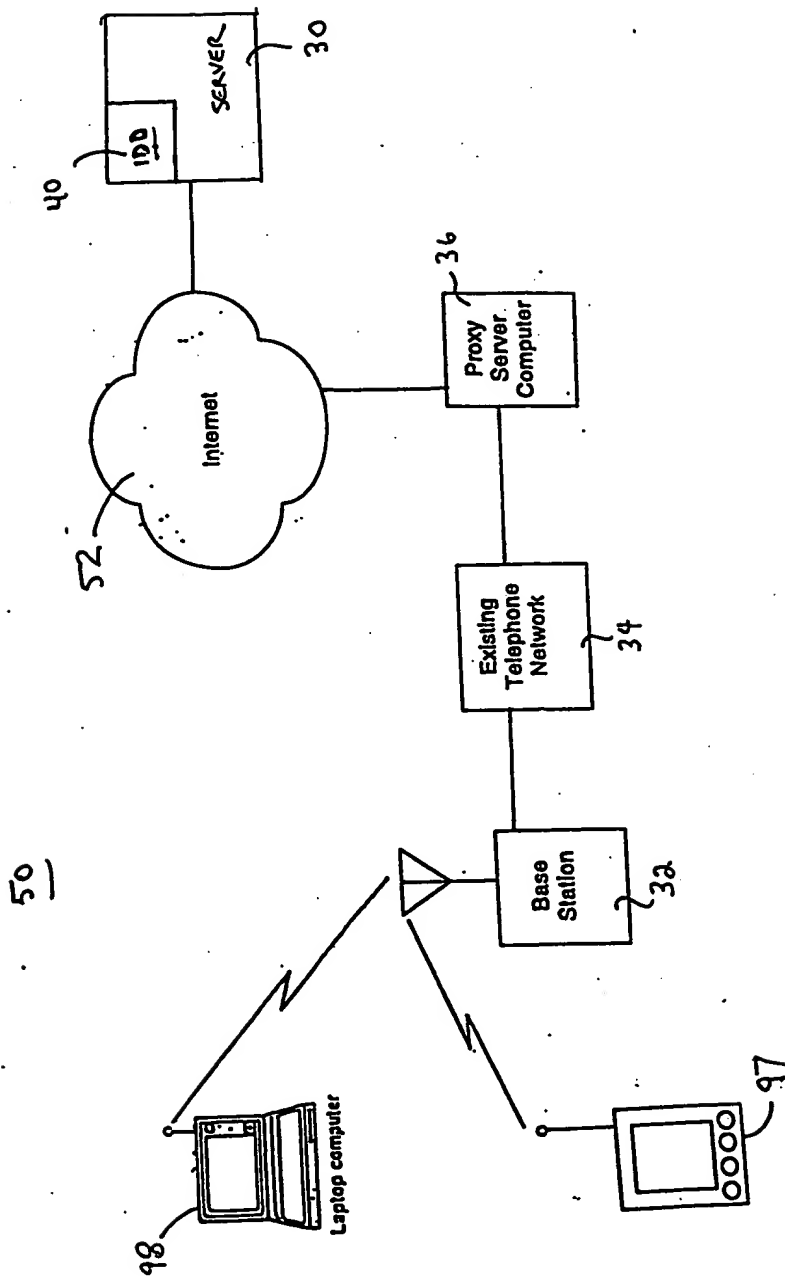


Figure 1

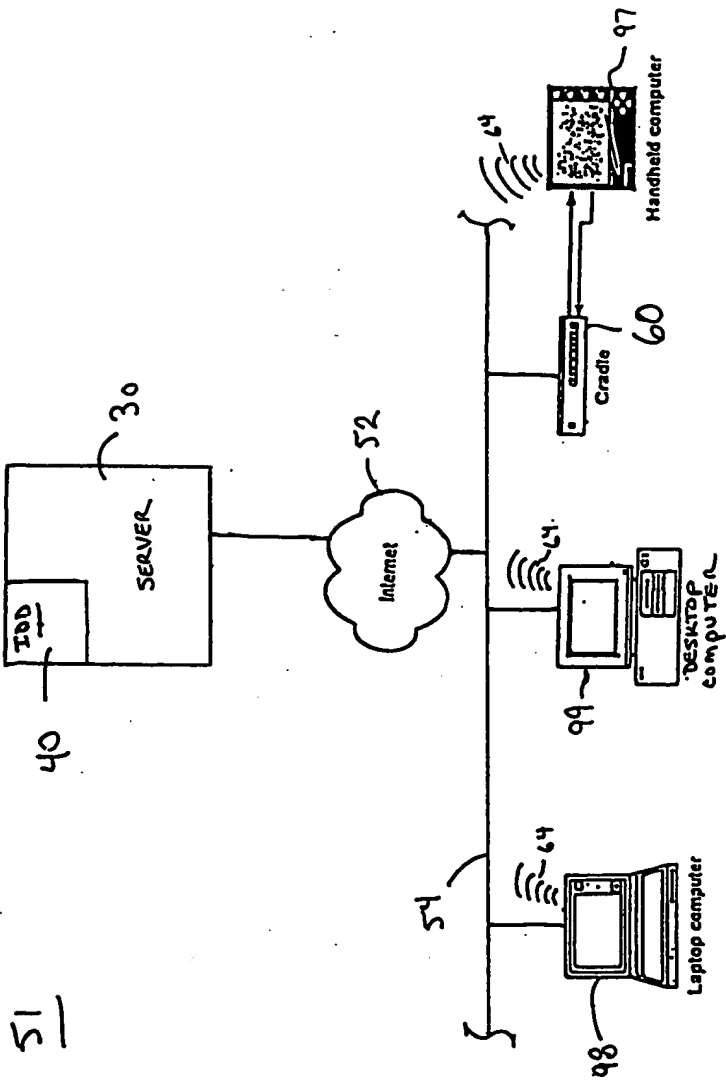


FIGURE 2

100

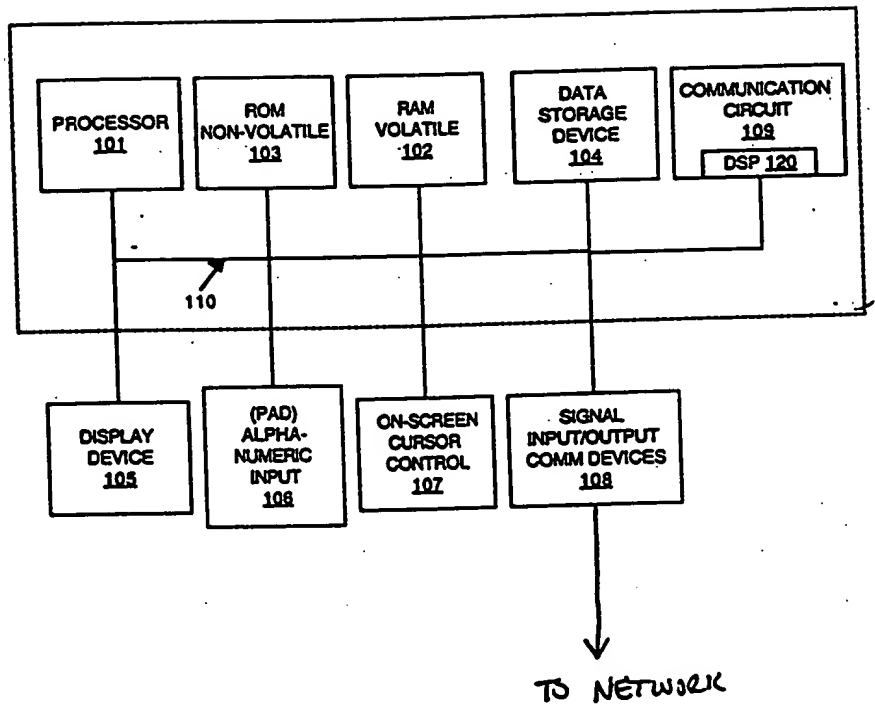


Figure 3

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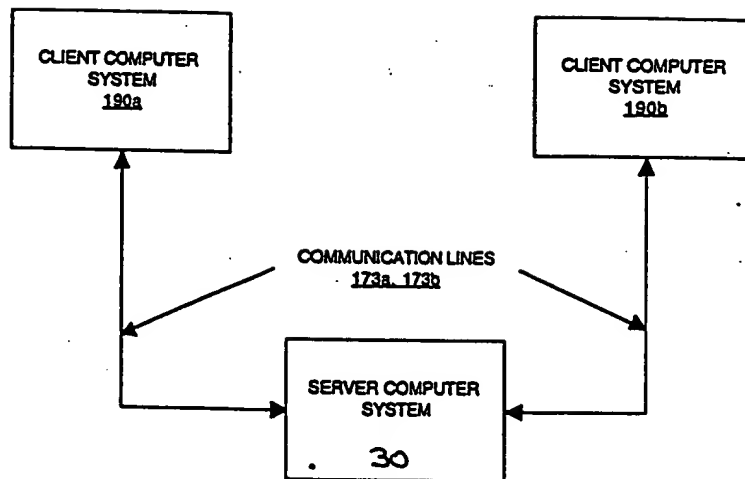


Figure 4



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Solution Technology Resource - Netcup

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**Solutions Delivery and Methodologies**

**Interactive Dynamic Documentation (ONLINE!)**

Document Type:

203

**Solutions Delivery and Methodologies**

**Interactive Dynamic Documentation (ONLINE!)**

Document Type:

**Select Document Type**

**Select Target Solution**

**General Information**

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**Changing the way we  
work, play and learn**

**Are YOU ready?**

FIGURE 6A



FIGURE 6B



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FIGURE 6C

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Navigation bar: CEC, CCO, SEARCH, INDEX, SUPPORT, FEEDBACK, DIRECTORY,

Navigation icons: Home, About, Contact Us, Privacy Policy, Terms of Use, Site Map, etc.

Section: **Solution Delivery and Methodologies**  
**Interactive Dynamic Documentation (ONLINE!)**

Dropdown menu: **Document Type**  
Solution Incubator Learning Guide  
Select Your Target Solution  
Select Target Solution  
Threats and Vulnerabilities  
Threats and Vulnerabilities 2.1  
Advisors

Buttons: , , ,

Main Content Area:  
**Changing the way we work, play and learn**  
***Are YOU ready?***

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FIGURE 6D

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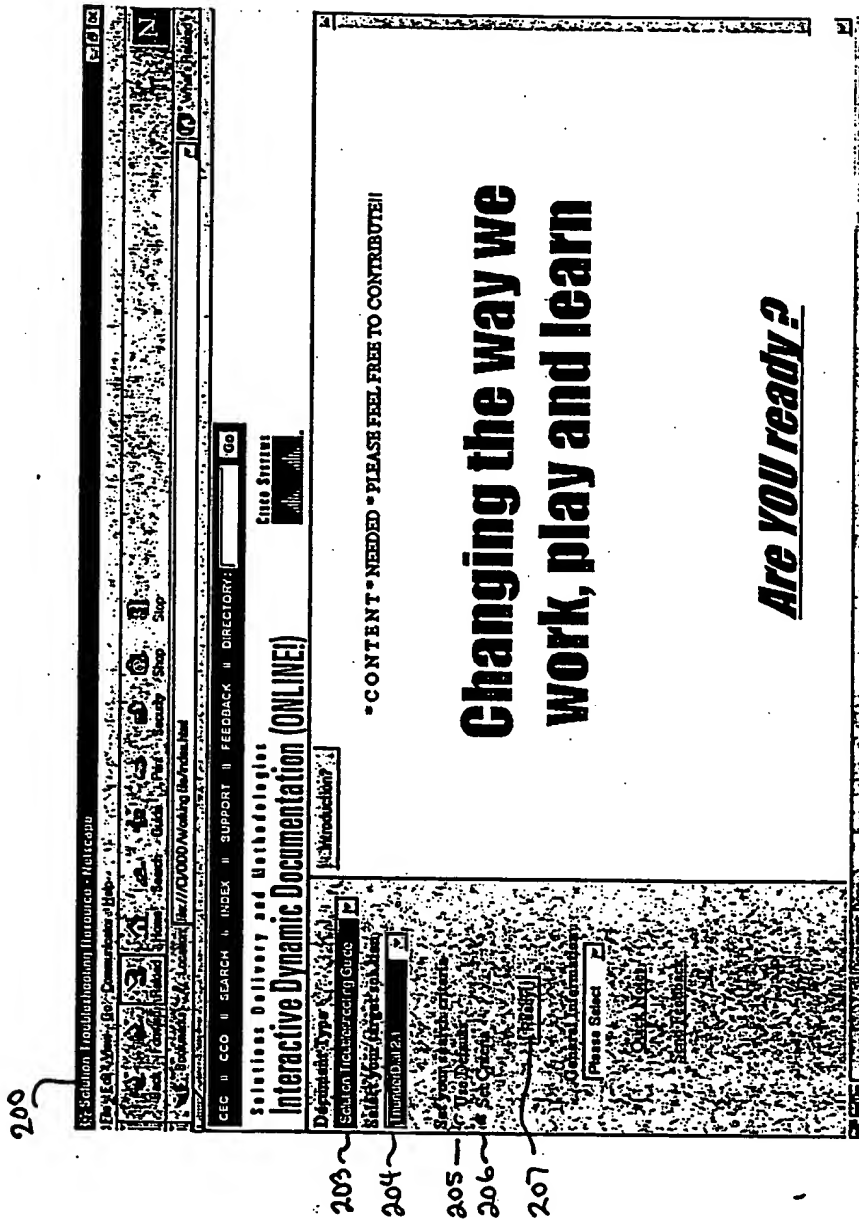


FIGURE 6F

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Subarea Troubleshooting Resources - Networks

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**Solutions Delivery and Methodologies**

**Troubleshooting and Analysis Assistant**

Thunder Dial 2.1.1 Solution Overview

The Cisco SS7 Interconnect for Access Servers Solution is a distributed system used for interconnecting Cisco network access servers (NASs) to a circuit-switched TDM network using Signaling System #7 (SS7) protocols for signaling. The interconnections are achieved using a protocol conversion platform called the Cisco Signaling Controller combined with the Cisco Signaling Link Terminal. The Cisco SC2200 comprises the hardware and software package that provides the signaling controller function in the Cisco SS7 Interconnect for Access Servers Solution. It provides high availability, high performance, and key scaling.

When large points of presence (POPs) receive calls from the Public Switched Telephone Network (PSTN), the traffic is running over legacy architecture. In-band signaling (such as Integrated Services Digital Network Primary Rate Interfaces (ISDN PRI)) in-band channel-associated signaling (CAS), or single analog lines) rather than out-of-band signaling the SS7 is used. With both signaling and bearer traffic running over the lines, these legacy switches become congested with modem traffic and limited circuits. Cisco offers the Cisco SS7 Interconnect for Access Servers Solution that offloads the signaling to an out-of-band network so that available bandwidth increases.

The Cisco SS7 Interconnect for Access Servers Solution is a distributed system that adds SS7 signaling interfaces to large ISP POPs. SS7 interfaces are connected to the PSTN by using the same signaling technology as a PSTN switch. The Cisco SS7 Interconnect for Access Servers Solution consists of the Cisco signaling controller (also referred to as the Cisco SC2200 product), which includes the Cisco Signaling Link Terminal (Cisco SLT) and the network access server (NAS). The Cisco SS7 Interconnect for Access Servers Solution turns a POP into an end-office switching system in the PSTN, allowing direct peer-to-peer signaling connectivity. The POP, as a switch, connects directly to the rest of the network as a peer. After connections to the Internet are aggregated at a POP, streams of user packets are statistically multiplexed for efficient transport over the backbone network.

FIGURE 7A

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Document Builder

Document Type ☐ Troubleshooting Guide ☒ 802

Product ☐ Thunder Dial 2.1 ~803

Criteria ☐ SLT 12.1.3 ~804  
☐ SAS 12.1.10  
☐ MGC 7.1.1

805A ~ ☐ 1 ☐ 2 ☐ Definitions

806A ~ ☐ 2 ☐ 3 ☐ Intellectual Property Rights

807A ~ ☐ 3 ☐ 4 ☐ Table Of Contents

808A ~ ☐ 4 ☐ 5 ☐ Introduction

☐ Document Purpose ~ 4.1

☐ Document Scope and Organization ~ 4.2

☐ Related Documents ~ 4.3

☐ Intended Audience

☐ Assumptions

809A ~ ☐ 5 ☐ 6 ☐ Thunder Dial Solution Overview

810A ~ ☐ 6 ☐ 7 ☐ Solution Hardware

811A ~ ☐ 7 ☐ 8 ☐ Single and Dual Configuration

☐ Thunder Dial Solution Hardware Components

☐ SC2200

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FIGURE 8A

802

Document Builder	
Document Type	Troubleshooting Guide — 802
Product	Thunder Dial 2.1
Criteria	SLT 12.1.3 NAS 12.1.10 MGC 7.4.1
805β	1 E P MML Commands
806β	2 V P Thunder Dial Solution Overview
807β	3 V P Solution Hardware
808β	4 V P Single and Dual Configuration
	P Problem Isolation — 4.1
	P Recommended Troubleshooting Sequence — 4.1.1
	P Troubleshooting The SC2200 Signal Controller — 4.2
	P Physical Layer — 4.2.1
	P Netra LEDs — 4.2.2
	P SLT (800) LEDs — 4.2.3
5 V	P Verify Component Configuration
6 V	P Checking Processes — 6.0
	P Checking Processes via UNIX — 6.1
	P Checking Processes via MML — 6.2

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850

FIGURE 8β

FIGURE 9

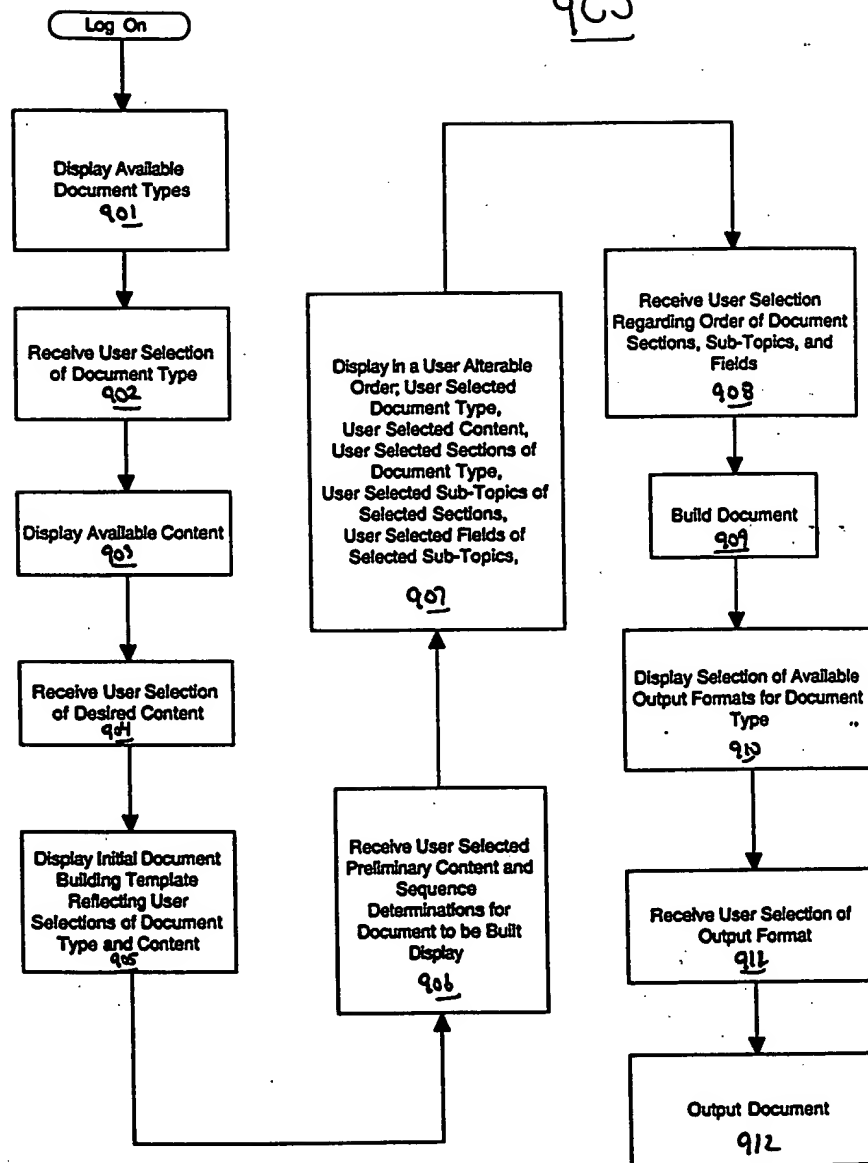


FIGURE 9